1. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$-4 - 9x \leq \frac{-51x - 3}{8} < 3 - 7x$$

A. $(-\infty, a] \cup (b, \infty)$, where $a \in [-3.75, -0.75]$ and $b \in [1.5, 7.5]$

B. $[a, b)$, where $a \in [-3, -1.2]$ and $b \in [-2.25, 10.5]$

C. $(a, b]$, where $a \in [-2.25, -0.75]$ and $b \in [3, 11.25]$

D. $(-\infty, a) \cup [b, \infty)$, where $a \in [-5.25, -0.75]$ and $b \in [3, 8.25]$

E. None of the above.

---

2. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$\frac{6}{8} - \frac{5}{9}x \geq \frac{-3}{5}x + \frac{10}{7}$$

A. $[a, \infty)$, where $a \in [-16.5, -14.25]$

B. $(-\infty, a]$, where $a \in [11.25, 15.75]$

C. $(-\infty, a]$, where $a \in [-17.25, -13.5]$

D. $[a, \infty)$, where $a \in [14.25, 16.5]$

E. None of the above.

---

3. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$-7x + 9 \leq 5x + 7$$

A. $[a, \infty)$, where $a \in [-0.09, 0.29]$

B. $(-\infty, a]$, where $a \in [-0.24, 0.06]$

C. $[a, \infty)$, where $a \in [-0.18, 0.1]$

D. $(-\infty, a]$, where $a \in [-0.15, 0.75]$

E. None of the above.

---

4. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$-5x - 9 \leq 6x + 5$$

A. $[a, \infty)$, where $a \in [0.27, 3.27]$

B. $(-\infty, a]$, where $a \in [-2.4, -1.1]$

C. $[a, \infty)$, where $a \in [-4.27, 0.73]$

D. $(-\infty, a]$, where $a \in [-1.2, 1.8]$

E. None of the above.

---

5. Using an interval or intervals, describe all the x-values within or including a distance of the given values.

Less than 6 units from the number 7.

A. $(-\infty, 1] \cup [13, \infty)$

B. $(1, 13)$

C. $[1, 13]$

D. $(-\infty, 1) \cup (13, \infty)$

E. None of the above

---

6. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$-3 - 9x \leq \frac{-34x + 9}{4} < 5 - 9x$$

A. $[a, b)$, where $a \in [6.75, 12]$ and $b \in [-6, -2.25]$

B. $(-\infty, a] \cup (b, \infty)$, where $a \in [8.25, 15]$ and $b \in [-11.25, -4.5]$

C. $(-\infty, a) \cup [b, \infty)$, where $a \in [3.75, 15.75]$ and $b \in [-6, -2.25]$

D. $(a, b]$, where $a \in [9, 11.25]$ and $b \in [-6.75, -3]$

E. None of the above.

---

7. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$-5 + 8x > 9x \text{ or } 9 + 8x < 11x$$

A. $(-\infty, a] \cup [b, \infty)$, where $a \in [-5.47, -4.35]$ and $b \in [1.5, 4.5]$

B. $(-\infty, a] \cup [b, \infty)$, where $a \in [-4.12, -2.77]$ and $b \in [4.5, 8.25]$

C. $(-\infty, a) \cup (b, \infty)$, where $a \in [-4.5, -2.25]$ and $b \in [4.5, 7.5]$

D. $(-\infty, a) \cup (b, \infty)$, where $a \in [-7.5, -3.75]$ and $b \in [0.75, 3.75]$

E. $(-\infty, \infty)$

---

8. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$-6 + 8x > 9x \text{ or } 7 + 3x < 5x$$

A. $(-\infty, a) \cup (b, \infty)$, where $a \in [-5.17, -0.45]$ and $b \in [5.25, 6.75]$

B. $(-\infty, a) \cup (b, \infty)$, where $a \in [-6.52, -4.27]$ and $b \in [1.5, 4.5]$

C. $(-\infty, a] \cup [b, \infty)$, where $a \in [-7.95, -5.55]$ and $b \in [2.25, 4.5]$

D. $(-\infty, a] \cup [b, \infty)$, where $a \in [-3.67, -0.3]$ and $b \in [4.5, 9]$

E. $(-\infty, \infty)$

---

9. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$\frac{-5}{9} - \frac{4}{8}x \leq \frac{8}{7}x + \frac{8}{6}$$

A. $[a, \infty)$, where $a \in [1.05, 1.95]$

B. $[a, \infty)$, where $a \in [-2.4, -0.97]$

C. $(-\infty, a]$, where $a \in [-2.62, -0.07]$

D. $(-\infty, a]$, where $a \in [-0.82, 1.27]$

E. None of the above.

---

10. Using an interval or intervals, describe all the x-values within or including a distance of the given values.

Less than 8 units from the number -1.

A. $(-\infty, -9) \cup (7, \infty)$

B. $(-\infty, -9] \cup [7, \infty)$

C. $(-9, 7)$

D. $[-9, 7]$

E. None of the above

---

11. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$-5 + 8x \leq \frac{37x - 3}{4} < -5 + 5x$$

A. $[a, b)$, where $a \in [-6.75, 1.5]$ and $b \in [-1.65, 0.15]$

B. $(-\infty, a) \cup [b, \infty)$, where $a \in [-6, -0.75]$ and $b \in [-2.02, 0]$

C. $(a, b]$, where $a \in [-9, -0.75]$ and $b \in [-2.17, -0.45]$

D. $(-\infty, a] \cup (b, \infty)$, where $a \in [-5.25, -1.5]$ and $b \in [-2.25, 0]$

E. None of the above.

---

12. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$\frac{-4}{3} - \frac{6}{9}x \leq \frac{-4}{2}x + \frac{7}{7}$$

A. $(-\infty, a]$, where $a \in [-6, 0.75]$

B. $[a, \infty)$, where $a \in [0.75, 4.5]$

C. $(-\infty, a]$, where $a \in [0.75, 4.5]$

D. $[a, \infty)$, where $a \in [-2.25, 0.75]$

E. None of the above.

---

13. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$5x + 9 < 9x - 8$$

A. $(-\infty, a)$, where $a \in [3.25, 8.25]$

B. (a, ∞), where $a \in [-4.25, -2.25]$

C. $(-\infty, a)$, where $a \in [-4.25, 1.75]$

D. (a, ∞), where $a \in [-1.75, 5.25]$

E. None of the above.

---

14. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$3x - 6 \geq 7x + 3$$

A. $(-\infty, a]$, where $a \in [-2.6, -0.1]$

B. $(-\infty, a]$, where $a \in [0.2, 4.2]$

C. $[a, \infty)$, where $a \in [1.25, 8.25]$

D. $[a, \infty)$, where $a \in [-4.25, 0.75]$

E. None of the above.

---

15. Using an interval or intervals, describe all the x-values within or including a distance of the given values.

No less than 4 units from the number 7.

A. $(-\infty, 3] \cup [11, \infty)$

B. $[3, 11]$

C. $(3, 11)$

D. $(-\infty, 3) \cup (11, \infty)$

E. None of the above

---

16. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$-7 - 4x < \frac{20x + 8}{4} \leq 8 + 4x$$

A. $(-\infty, a] \cup (b, \infty)$, where $a \in [-3, 0.75]$ and $b \in [1.5, 9]$

B. $(a, b]$, where $a \in [-2.55, -0.22]$ and $b \in [5.25, 8.25]$

C. $[a, b)$, where $a \in [-4.5, -0.75]$ and $b \in [4.5, 11.25]$

D. $(-\infty, a) \cup [b, \infty)$, where $a \in [-2.17, 0.3]$ and $b \in [2.25, 7.5]$

E. None of the above.

---

17. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$-3 + 7x > 9x \text{ or } 4 + 5x < 6x$$

A. $(-\infty, a) \cup (b, \infty)$, where $a \in [-3.75, -0.75]$ and $b \in [3.23, 4.42]$

B. $(-\infty, a] \cup [b, \infty)$, where $a \in [-4.27, -2.32]$ and $b \in [1.2, 1.65]$

C. $(-\infty, a) \cup (b, \infty)$, where $a \in [-7.5, -2.25]$ and $b \in [0.07, 2.7]$

D. $(-\infty, a] \cup [b, \infty)$, where $a \in [-3.97, 1.12]$ and $b \in [2.32, 4.35]$

E. $(-\infty, \infty)$

---

18. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$-5 + 4x > 7x \text{ or } 7 + 7x < 9x$$

A. $(-\infty, a) \cup (b, \infty)$, where $a \in [-3.71, -3.04]$ and $b \in [0.97, 3.38]$

B. $(-\infty, a] \cup [b, \infty)$, where $a \in [-4.5, -1.72]$ and $b \in [-1.35, 3.23]$

C. $(-\infty, a) \cup (b, \infty)$, where $a \in [-2.21, -0.17]$ and $b \in [1.8, 5.1]$

D. $(-\infty, a] \cup [b, \infty)$, where $a \in [-1.8, -0.82]$ and $b \in [3.3, 3.67]$

E. $(-\infty, \infty)$

---

19. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$\frac{-9}{4} - \frac{6}{7}x < \frac{8}{8}x + \frac{7}{5}$$

A. (a, ∞), where $a \in [0, 4.5]$

B. $(-\infty, a)$, where $a \in [0, 4.5]$

C. $(-\infty, a)$, where $a \in [-2.25, 0]$

D. (a, ∞), where $a \in [-6.75, -0.75]$

E. None of the above.

---

20. Using an interval or intervals, describe all the x-values within or including a distance of the given values.

No more than 10 units from the number -7.

A. $(-17, 3)$

B. $[-17, 3]$

C. $(-\infty, -17) \cup (3, \infty)$

D. $(-\infty, -17] \cup [3, \infty)$

E. None of the above

---

21. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$5 + 6x < \frac{36x + 4}{4} \leq 4 + 8x$$

A. $(-\infty, a) \cup [b, \infty)$, where $a \in [-4.5, 0.75]$ and $b \in [-5.25, 2.25]$

B. $(-\infty, a] \cup (b, \infty)$, where $a \in [-2.55, 0.38]$ and $b \in [-6.75, -1.5]$

C. $[a, b)$, where $a \in [-1.72, -0.22]$ and $b \in [-5.25, 2.25]$

D. $(a, b]$, where $a \in [-4.5, -0.75]$ and $b \in [-7.5, 0]$

E. None of the above.

---

22. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$\frac{-5}{4} - \frac{7}{8}x \leq \frac{-4}{5}x + \frac{8}{3}$$

A. $(-\infty, a]$, where $a \in [51.75, 54.75]$

B. $[a, \infty)$, where $a \in [51, 53.25]$

C. $[a, \infty)$, where $a \in [-54.75, -51.75]$

D. $(-\infty, a]$, where $a \in [-54, -46.5]$

E. None of the above.

---

23. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$-10x + 8 > 6x - 5$$

A. (a, ∞), where $a \in [-0.3, 1.8]$

B. (a, ∞), where $a \in [-1.8, -0.1]$

C. $(-\infty, a)$, where $a \in [-0.4, 2.4]$

D. $(-\infty, a)$, where $a \in [-1.5, 0.2]$

E. None of the above.

---

24. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$-10x + 4 \leq 7x + 7$$

A. $(-\infty, a]$, where $a \in [-0.27, -0.05]$

B. $[a, \infty)$, where $a \in [-0.38, -0]$

C. $[a, \infty)$, where $a \in [0.03, 0.36]$

D. $(-\infty, a]$, where $a \in [-0.06, 0.27]$

E. None of the above.

---

25. Using an interval or intervals, describe all the x-values within or including a distance of the given values.

No more than 5 units from the number -10.

A. $(-15, -5)$

B. $(-\infty, -15) \cup (-5, \infty)$

C. $[-15, -5]$

D. $(-\infty, -15] \cup [-5, \infty)$

E. None of the above

26. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$-4 - 3x < \frac{-22x + 6}{9} \leq -7 - 5x$$

A. $(-\infty, a] \cup (b, \infty)$, where $a \in [6, 13.5]$ and $b \in [-1.5, 6]$

B. $[a, b)$, where $a \in [3, 9.75]$ and $b \in [2.25, 5.25]$

C. $(a, b]$, where $a \in [3.75, 9.75]$ and $b \in [-0.75, 5.25]$

D. $(-\infty, a) \cup [b, \infty)$, where $a \in [6.75, 13.5]$ and $b \in [2.25, 6]$

E. None of the above.

27. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$-3 + 4x > 7x \text{ or } 5 + 9x < 10x$$

A. $(-\infty, a] \cup [b, \infty)$, where $a \in [-2.25, 1.5]$ and $b \in [4.5, 6.75]$

B. $(-\infty, a) \cup (b, \infty)$, where $a \in [-7.95, -3.23]$ and $b \in [-0.75, 4.5]$

C. $(-\infty, a] \cup [b, \infty)$, where $a \in [-8.25, -3]$ and $b \in [-1.5, 3]$

D. $(-\infty, a) \cup (b, \infty)$, where $a \in [-1.43, 1.43]$ and $b \in [3, 10.5]$

E. $(-\infty, \infty)$

28. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$5 + 4x > 7x \text{ or } 7 + 4x < 5x$$

A. $(-\infty, a] \cup [b, \infty)$, where $a \in [-2.25, 6]$ and $b \in [4.5, 9.75]$

B. $(-\infty, a] \cup [b, \infty)$, where $a \in [-10.5, -6]$ and $b \in [-4.5, 0]$

C. $(-\infty, a) \cup (b, \infty)$, where $a \in [-9.75, -3]$ and $b \in [-5.25, -1.5]$

D. $(-\infty, a) \cup (b, \infty)$, where $a \in [0.75, 4.5]$ and $b \in [3, 10.5]$

E. $(-\infty, \infty)$

---

29. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$\frac{8}{2} - \frac{10}{3}x > \frac{5}{6}x - \frac{9}{5}$$

A. $(-\infty, a)$, where $a \in [-0.75, 3.75]$

B. $(-\infty, a)$, where $a \in [-6.75, 0]$

C. (a, ∞), where $a \in [0, 3.75]$

D. (a, ∞), where $a \in [-2.25, 0]$

E. None of the above.

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30. Using an interval or intervals, describe all the x-values within or including a distance of the given values.

Less than 9 units from the number 6.

A. $(-\infty, -3) \cup (15, \infty)$

B. $[-3, 15]$

C. $(-\infty, -3] \cup [15, \infty)$

D. $(-3, 15)$

E. None of the above
